Appl. No.

09/727,424

Filed

December 1, 2000

AMENDMENTS TO THE DRAWINGS

As stated below, Applicant has requested to amend Figures 1e, 4, 5, 6, 8, 10, and 14 to correct clerical errors, as shown in the attached copies of the figures labeled "Annotated Sheet Showing Changes" wherein the corrections are indicated with red ink.

REQUEST FOR APPROVAL OF DRAWING CHANGES

The amendment requested herein is to correct clerical errors of Figures 1e, 4, 5, 6, 8, 10, and 14 as shown with red ink in the attached copies of the figures labeled "Annotated Sheet Showing Changes". That is, Figure 1e has been amended to indicate an arrowhead which was missing. Figures 4, 5, and 6 have been amended to match the numerals and the words indicating the same structures. Figures 8, 10, and 14 have been amended to clarify a selection at step I (page 16, lines 3-5 of the specification, for example). No new matter has been added. Replacement Sheets are enclosed herein. Approval of this amendment is respectfully requested.



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device #2 assembly device #1 machine user parameters a1, a2, a3,.. control module for device #1 process a2, a3, heuristic optimization systemin per selection based on interaction with user or predetermined target

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device #2 assembly device #1 machine parameters a1, a2, a3, control module optimization system auxiliary main control module for device #1 input input

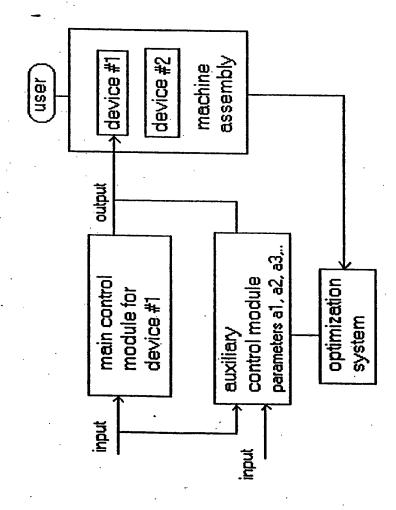
Fig. 1b

Sheet Replacement

APPARATOS FOR OPTIMIZING CONTROL SYSTEM OF UNIT DEVICE INTEGRATED IN MACHINE ASSEMBLY

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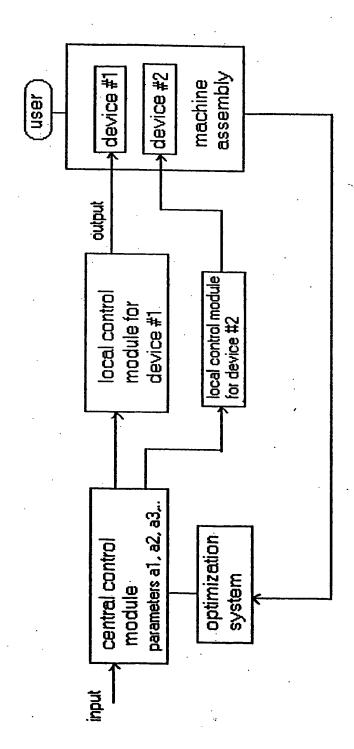
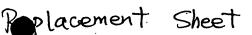


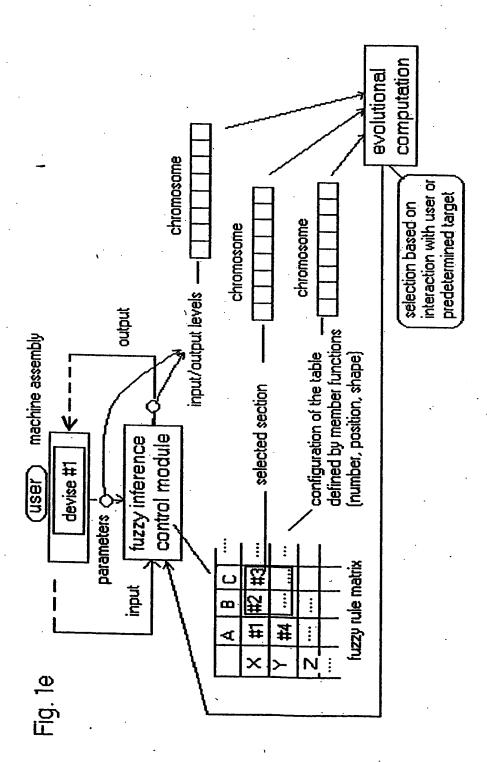
Fig. 1d





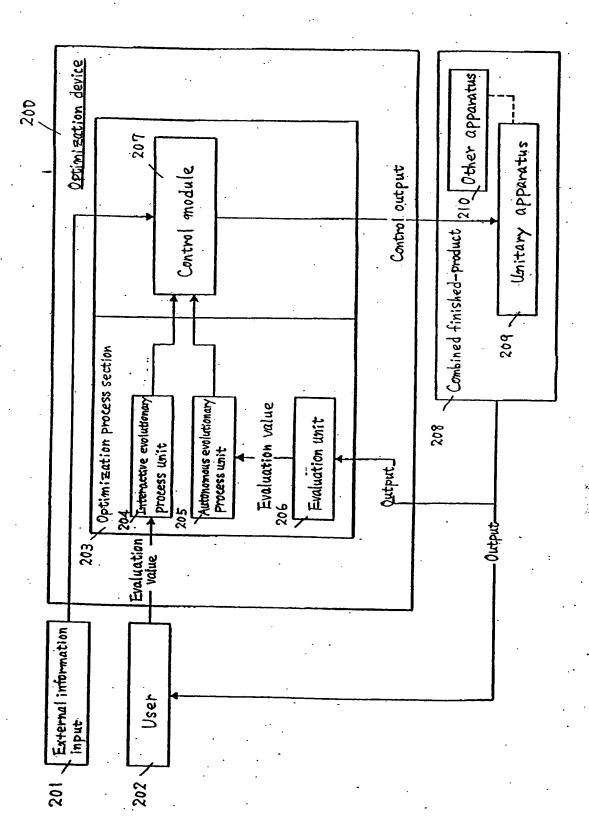
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Replacement Sheet

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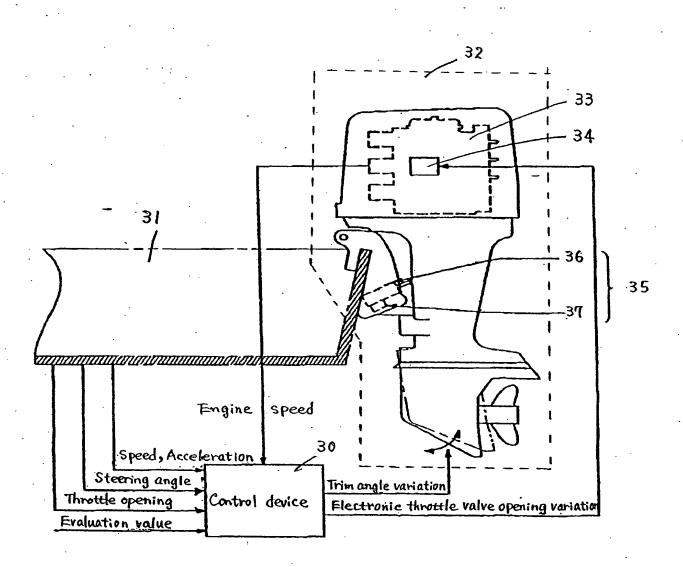
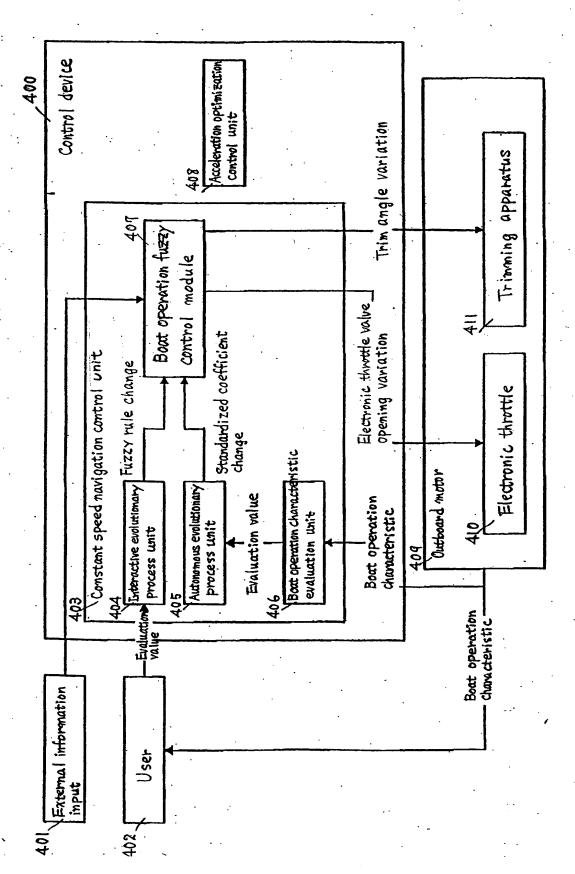


FIG. 3

SEP 2 5 2003 FRADEWARD THE Replacement Sheet

ARATUS FOR OPTIMIZING CONTROL SYSTEM OF UNIT DEVICE INTEGRATED IN MACHINE ASSEMBLY KAJI, et al.

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APPARATUS FOR OPTIMIZING CONTROL SYSTEM OF UNIT DEVICE INTEGRATED IN MACHINE ASSEMBLY KAJI, et al.

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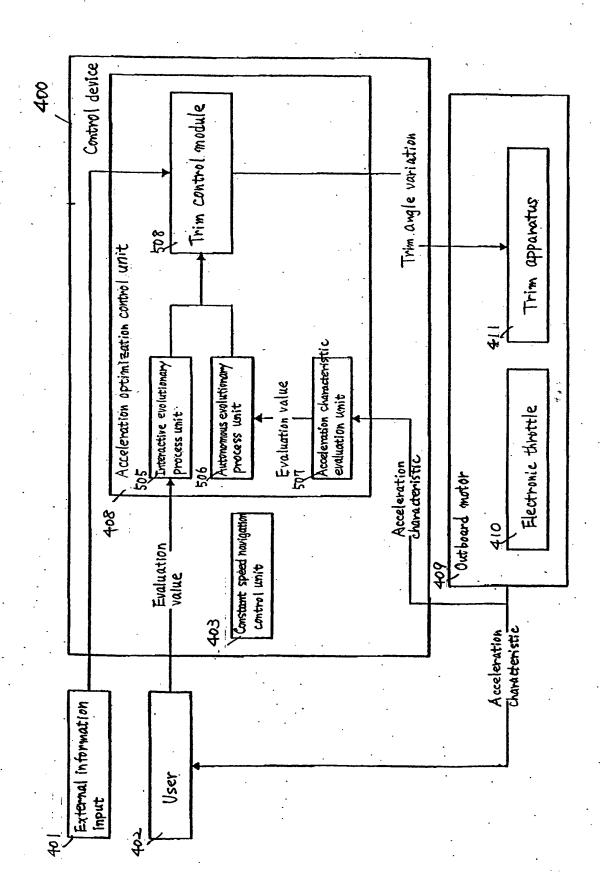


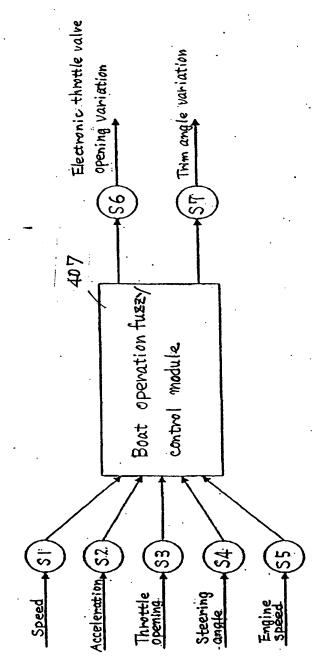
FIG. 5

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Standardized coefficients

Standardized coefficients



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Perturbation with normalized randon numbers added

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+0.	+2.	+1.5. +5.
•	4.	
+1. 3° +0. 4° +6.	+1, 4	+0.9.+0.6.
ູນ	-0, 3.	. 6
+0.5	-0.	+0.

Extraction

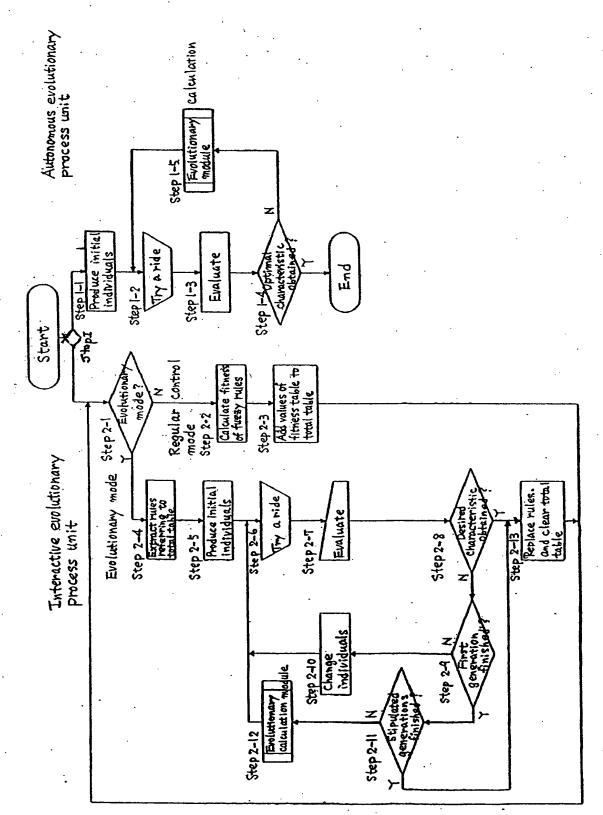
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S	-2.	-1-	• 0
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NL	+1•	+2.	+10.

Fuzzy rule table

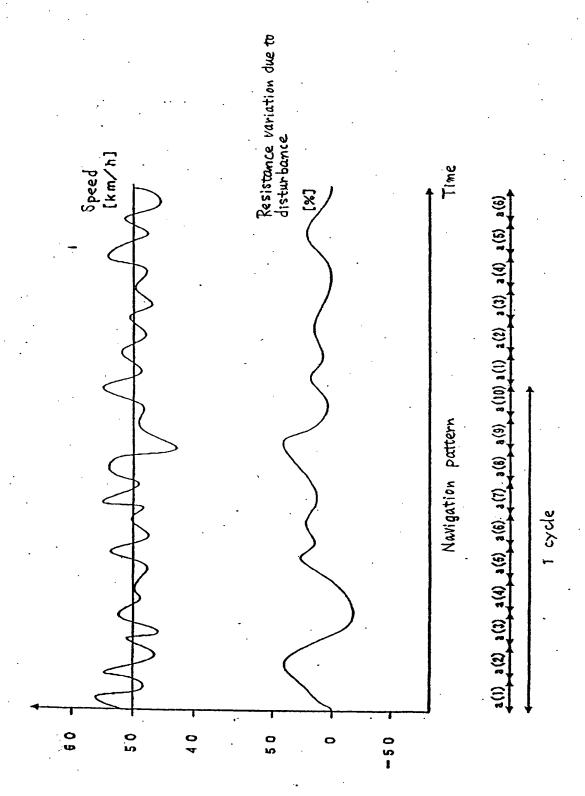
output: Electronic throttle valve opening variable input: Speed. Accelemtion

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 ∞ FIG. PA US FOR OPTIMIZING CONTROL SYSTEM OF O DEVICE INTEGRATED IN MACHINE ASSEMBLY KAJI, et al. Appl. No.: 09/727,424 Atty Docket: YAMAH5.970A



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Evolutionary Process Autonomous Evolutionary Process nteractive

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SLOW		0.28	0, 12		
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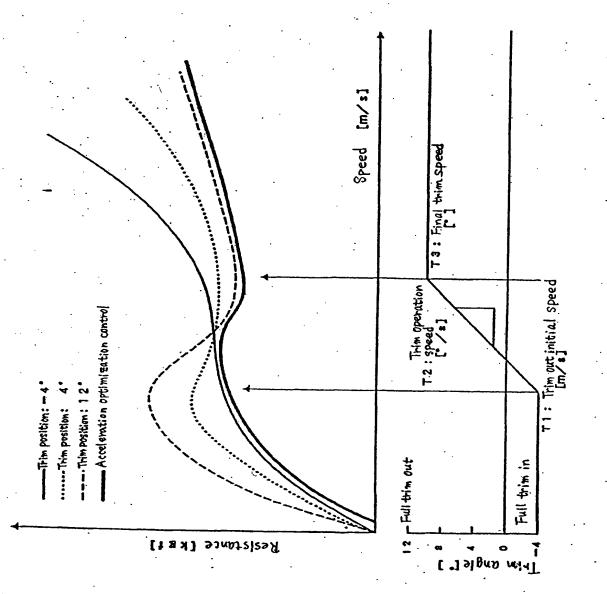
Total table

Fitness table

Acceleration



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T1 T2 T3

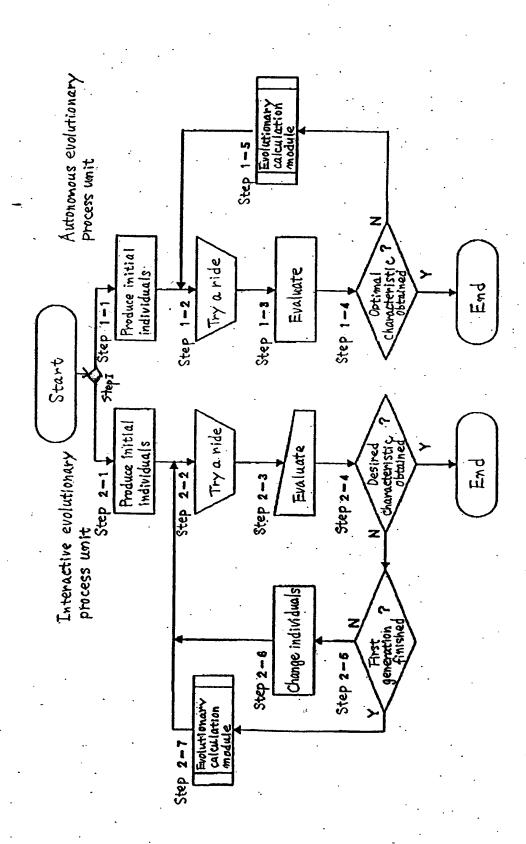
FIG. 13

Replacement Sheet

PARATUS FOR OPTIMIZING CONTROL SYSTEM OF UNIT DEVICE INTEGRATED IN MACHINE ASSEMBLY KAJI, et al.

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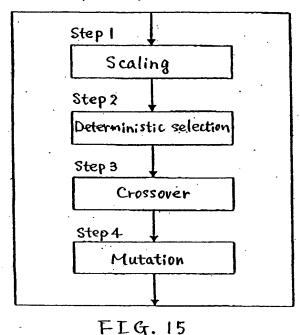


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AF ATUS FOR OPTIMIZING CONTROL SYSTEM ONIT DEVICE INTEGRATED IN MACHINE ASSEMBLY KAJI, et al.

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Evolutionary computation module (GA)



1 24.13

Evolutionary computation module (ES)

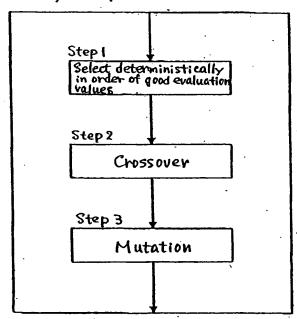


FIG. 16

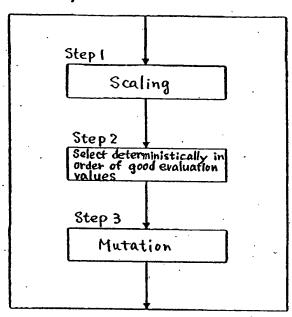
eplacement Sheet

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APPARATUS FOR OPTIMIZING CONTROL SYSTEM OF UNIT DEVICE INTEGRATED IN MACHINE ASSEMBLY KAJI, et al.

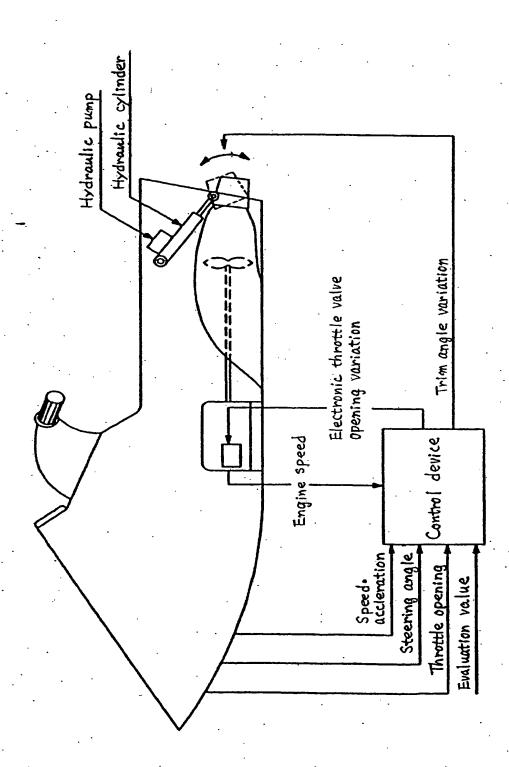
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Evolutionary computation module (EP)



FLG. 17

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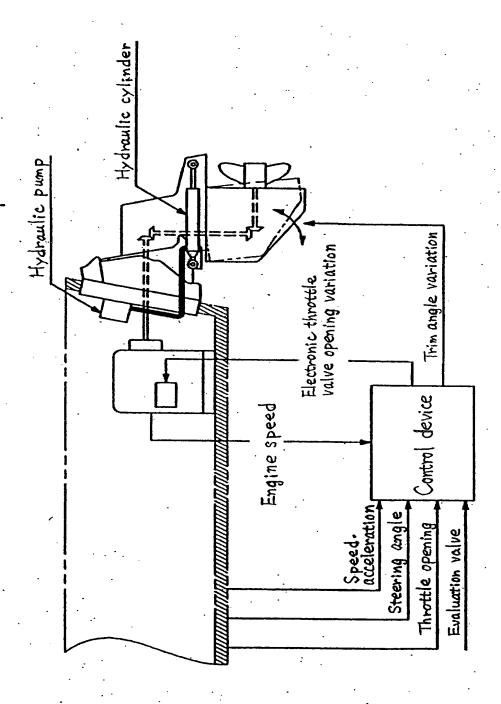
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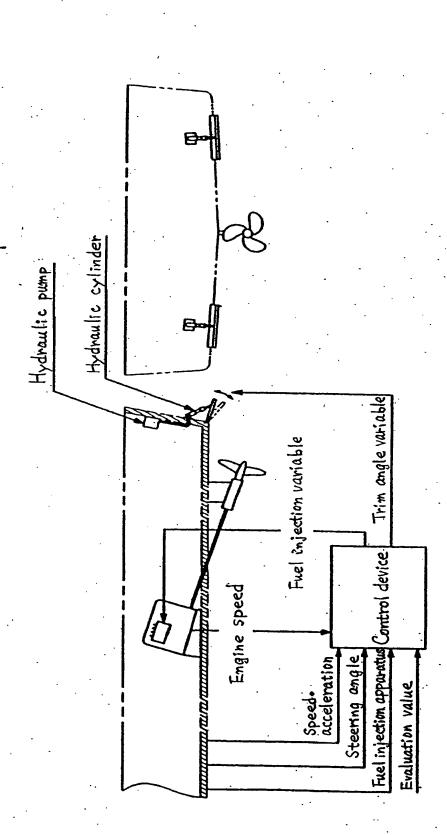
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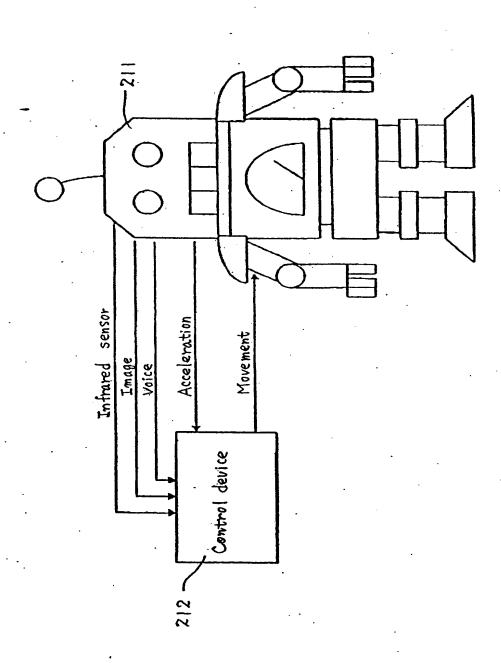


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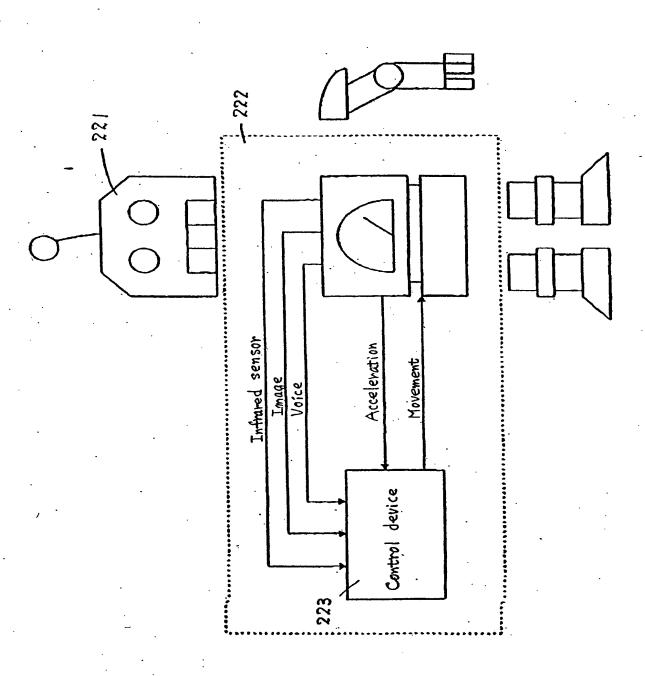
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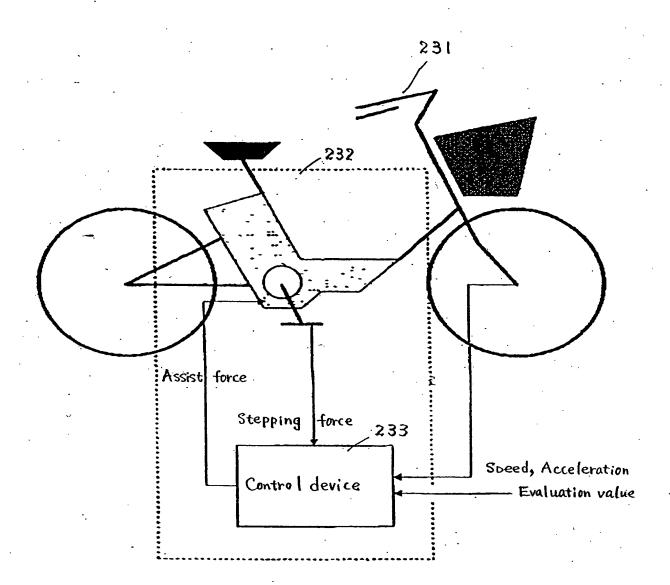
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